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**VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT
AUF DEM GEBIET DES PATENTWESENS**

PCT

INTERNATIONALER VORLÄUFIGER PRÜFUNGSBERICHT

(Artikel 36 und Regel 70 PCT)

REC'D 29 JAN 2002

WIPO PCT

Aktenzeichen des Anmelders oder Anwalts DA-055 WO	WEITERES VORGEHEN siehe Mitteilung über die Übersendung des internationalen vorläufigen Prüfungsberichts (Formblatt PCT/IPEA/416)	
Internationales Aktenzeichen PCT/EP 01/ 03673	Internationales Anmeldedatum (Tag/Monat/Jahr) 30/03/2001	Prioritätsdatum (Tag/Monat/Jahr) 04/04/2000
Internationale Patentklassifikation (IPK) oder nationale Klassifikation und IPK <p style="text-align: center;">B65G35/06</p>		
Anmelder TETRA LAVAL HOLDINGS & FINANCE S.A.		

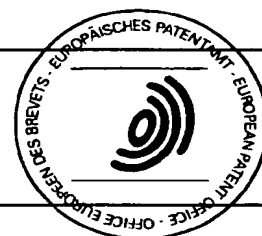
1. Der internationale vorläufige Prüfungsbericht wurde von der mit der internationalen vorläufigen Prüfung beauftragten Behörde erstellt und wird dem Anmelder gemäß Artikel 36 übermittelt.
2. Dieser **BERICHT** umfaßt insgesamt 2 Blätter einschließlich dieses Deckblatts.

☐ Außerdem liegen dem Bericht **ANLAGEN** bei; dabei handelt es sich um Blätter mit Beschreibungen, Ansprüchen und/oder Zeichnungen, die geändert wurden und diesem Bericht zugrunde liegen, und/oder Blätter mit vor dieser Behörde vorgenommenen Berichtigungen (siehe Regel 70.16 und Abschnitt 607 der Verwaltungsvorschriften zum PCT)

Diese Anlagen umfassen insgesamt Blätter.

3. Dieser Bericht enthält Angaben und die entsprechenden Seiten zu folgenden Punkten:
 - I ☒ Grundlage des Berichts
 - II ☐ Priorität
 - III ☒ Keine Erstellung eines Gutachtens über Neuheit, erfinderische Tätigkeit und gewerbliche Anwendbarkeit
 - IV ☐ Mangelnde Einheitlichkeit der Erfindung
 - V ☒ Begründete Feststellung nach Artikel 35(2) hinsichtlich der Neuheit, der erfinderischen Tätigkeit und der gewerblichen Anwendbarkeit; Unterlagen und Erklärungen zur Stützung dieser Feststellung
 - VI ☐ Bestimmte angeführte Unterlagen
 - VII ☐ Bestimmte Mängel der internationalen Anmeldung
 - VIII ☐ Bestimmte Bemerkungen zur internationalen Anmeldung

Datum der Einreichung des Antrags 16/10/2001	Datum der Fertigstellung dieses Berichts 23/01/2002
Name und Postanschrift der mit der internationalen vorläufigen Prüfung beauftragten Behörde <div style="display: flex; align-items: center;"> <div> Europäisches Patentamt, P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Niederlande Tel.: (+31-70) 340-2040 Fax: (+31-70) 340-3016 </div> </div>	Bevollmächtigter Bediensteter ZIDI K Tel. (+49-89) 2399 2828



I. Grundlage des Berichts

1. Grundlage dieses internationalen vorläufigen Prüfungsberichts ist die Anmeldung in der ursprünglich eingereichten Fassung.

III. Keine Erstellung eines Gutachtens über Neuheit, erfinderische Tätigkeit und gewerbliche Anwendbarkeit

2. Die Frage, ob die beanspruchte Erfindung als neu, auf erfinderischer Tätigkeit beruhend und gewerblich anwendbar anzusehen ist, war und wird nicht Gegenstand einer internationalen vorläufigen Prüfung (Art. 34 (4) a) i), ii) PCT; s.a. internationaler Recherchenbericht) für:

- 2.1 Anmeldungen mit unnötigen unabhängigen Ansprüchen (im allgemeinen ist nicht mehr als ein unabhängiger Anspruch pro Kategorie erforderlich; Artikel 6 PCT)

- 2.2 nicht recherchierte Gegenstände (Artikel 17 (2) a), Regel 66.1 e) PCT)

V. Begründete Feststellung nach Artikel 35(2) hinsichtlich der Neuheit, der erfinderischen Tätigkeit und der gewerblichen Anwendbarkeit

3. Soweit die internationale vorläufige Prüfung durchgeführt wurde (s. Punkt III), ist folgendes anzumerken (Artikel 35 (2) und (3) b) sowie Regel 70.7 und 70.8 ii) PCT):

In Anbetracht der im internationalen Recherchenbericht angeführten Unterlagen wird festgestellt, daß die Erfindung, wie sie in den unabhängigen Ansprüchen gekennzeichnet ist, allem Anschein nach die in Artikel 33 (1) PCT aufgeführten Kriterien erfüllt, d. h. als neu, auf erfinderischer Tätigkeit beruhend und gewerblich anwendbar anzusehen ist.

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference ST/1000392	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/SG 99/ 00095	International filing date (day/month/year) 29/09/1999	(Earliest) Priority Date (day/month/year)
Applicant STMICROELECTRONICS ASIA PACIFIC PTE LTD et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of Invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☒ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

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☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/SG 99/00095

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G06F9/40

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 10807 A (CIRRUS LOGIC INC) 4 March 1999 (1999-03-04)	1-3, 8-10
Y	page 6, line 24 -page 10, line 9	6, 13
A		4, 5, 7, 11, 12, 14-16
Y	US 5 285 264 A (MATSUSHITA AKIRA) 8 February 1994 (1994-02-08)	6, 13
A	column 1, line 36 -column 2, line 3 column 8, line 17 - line 52	1, 8, 15, 16
X	US 3 789 368 A (DERVILLE D) 29 January 1974 (1974-01-29)	1, 3, 8, 10, 15, 16
A	column 2, line 34 -column 3, line 6	4-7, 11-14
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

° Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

11 August 2000

Date of mailing of the international search report

21/08/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Bijn, K

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/SG 99/00095

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 687 105 A (KATO MITSUMI ET AL) 11 November 1997 (1997-11-11) column 2, line 54 -column 3, line 33; figure 4 -----	1-16

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/SG 99/00095

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9910807 A	04-03-1999	AU 8501998 A EP 1004074 A	16-03-1999 31-05-2000
US 5285264 A	08-02-1994	JP 3283976 A CA 2038457 A DE 69115962 D DE 69115962 T EP 0449075 A	13-12-1991 01-10-1991 15-02-1996 13-06-1996 02-10-1991
US 3789368 A	29-01-1974	FR 2134805 A BE 780135 A DE 2219070 A GB 1344203 A IT 953967 B JP 52035505 B NL 7205128 A	08-12-1972 03-07-1972 02-11-1972 16-01-1974 10-08-1973 09-09-1977 24-10-1972
US 5687105 A	11-11-1997	JP 2773601 B JP 6348262 A	09-07-1998 22-12-1994

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NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
US Department of Commerce
United States Patent and Trademark
Office, PCT
2011 South Clark Place Room
CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE
in its capacity as elected Office

Date of mailing (day/month/year) 12 June 2001 (12.06.01)	
International application No. PCT/SG99/00095	Applicant's or agent's file reference ST/1000392
International filing date (day/month/year) 29 September 1999 (29.09.99)	Priority date (day/month/year)
Applicant TIAN, Wenshun et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
12 April 2001 (12.04.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Olivia TEFY Telephone No.: (41-22) 338.83.38
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REC'D 31 JUL 2001

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

3

Applicant's or agent's file reference ./.		FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/SG99/00095	International filing date (day/month/year) 29/09/1999	Priority date (day/month/year) 29/09/1999	
International Patent Classification (IPC) or national classification and IPC G06F9/40			
Applicant STMICROELECTRONICS ASIA PACIFIC PTE LTD et al.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 12/04/2001	Date of completion of this report 27.07.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Lacroix, P Telephone No. +49 89 2399 2707 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/SG99/00095

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-10 as originally filed

Claims, No.:

1-16 as originally filed

Drawings, sheets:

1-3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/SG99/00095

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-16
	No:	Claims	
Inventive step (IS)	Yes:	Claims	1-16
	No:	Claims	
Industrial applicability (IA)	Yes:	Claims	1-16
	No:	Claims	

2. Citations and explanations **see separate sheet**

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

- 1). Reference is made to the following document:

D1: WO 99 10807 A (CIRRUS LOGIC INC) 4 March 1999 (1999-03-04)

- 2). The present invention is directed to a method and system for implementing a plurality of codecs using a single digital signal processor.

Prior art:

Document D1 discloses how multi-instanced software can be utilized to implement a plurality of virtual modems which can be used simultaneously. Entire controllerless software modems operate multi-instanced with a single code set. Two software modules interface with the DSP hardware. The modem control layer manipulates DSP modes, creates and destroys modem connections, and monitors modem activity. The Line I/O Layer is responsible for transferring data to and from the DSP.

Problem:

With the deployment of more powerful DSPs, it appears possible to implement a plurality of codecs using a single DSP chip. It appears possible to process a plurality of different audio signals or channels in real-time, to thereby implement a plurality of voice coders using a single processing device.

Solution:

The present invention provides a method and system in which the software operating the DSP itself operates multi-instanced. The instruction code in the first memory runs a plurality of times in re-entrant instances, wherein each instance is provided access to a respective separate memory segment in a second memory for storing data used in encoding/decoding a respective separate data stream.

- 3). The dependent claims are directed to specific embodiments of the invention

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/SG99/00095

according to claims 1, 15 resp 8. The dependent claims thus meet the requirements of novelty, inventive step and industrial application.

Re Item VII

Certain defects in the international application

Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the document D:1 is not mentioned in the description, nor is this document identified therein.

Re Item VIII

Certain observations on the international application

Although claims 1, 15 resp. 8, 16 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought. The aforementioned claims therefore lack conciseness. Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is sought.

Hence, claims 1, 15 resp. 8, 16 do not meet the requirements of Article 6 PCT.